# **EXCELCHEM**Environmental Labs

1135 W Sunset Boulevard Suite A Rocklin, CA 95765 Phone# 916-543-4445 Fax# 916-543-4449



**ELAP Certificate No.: 2119** 

08 July 2013 Jeff Huggins

RWQC Central Valley

11020 Sun Center Dr. #200

Rancho Cordova, CA 95670

RE: Walker Mine

Work order number:1306272

Enclosed are the results of analyses for samples received by the laboratory on 06/19/13 15:21. All Quality Control results are within acceptable limits except where noted as a case narrative. If you have any questions concerning this report, please feel free to contact the laboratory.

Sincerely,

John Somers, Lab Director

RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

## ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
WM-1	1306272-01	Water	06/18/13 09:45	06/19/13 15:21
WM-30	1306272-02	Water	06/18/13 11:45	06/19/13 15:21
WM-2	1306272-03	Water	06/18/13 12:30	06/19/13 15:21
WM-19	1306272-04	Water	06/18/13 12:45	06/19/13 15:21
WM-3	1306272-05	Water	06/18/13 12:50	06/19/13 15:21
WM-4	1306272-06	Water	06/18/13 13:00	06/19/13 15:21
WM-9	1306272-07	Water	06/18/13 13:15	06/19/13 15:21
WM-5	1306272-08	Water	06/18/13 13:30	06/19/13 15:21
WM-7b	1306272-09	Water	06/18/13 13:50	06/19/13 15:21
WM-7c	1306272-10	Water	06/18/13 14:00	06/19/13 15:21
WM-7a	1306272-11	Water	06/18/13 14:25	06/19/13 15:21
WM-11	1306272-12	Water	06/19/13 08:15	06/19/13 15:21
WM-12	1306272-13	Water	06/19/13 08:30	06/19/13 15:21
WM-13	1306272-14	Water	06/19/13 08:40	06/19/13 15:21
WM-17	1306272-15	Water	06/19/13 08:50	06/19/13 15:21
WM-18	1306272-16	Water	06/19/13 09:20	06/19/13 15:21
WM-16	1306272-17	Water	06/19/13 09:45	06/19/13 15:21
WM-15	1306272-18	Water	06/19/13 09:55	06/19/13 15:21
WM-14	1306272-19	Water	06/19/13 10:00	06/19/13 15:21
WM-20	1306272-20	Water	06/19/13 11:00	06/19/13 15:21

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Date Reported:

07/08/13 09:50

RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-1 1306272-01 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.6	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	1.0	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	62.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	62.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	110	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.60	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	90.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	52.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	
Arsenic	12.5	10.0	1.0	"	1	"	"	"	"	
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	12100	100	79.0	"	1	"	"	"	"	
Copper	93.6	5.0	0.8	"	1	"	"	"	"	
Iron	34.8	20.0	11.5	"	1	"	"	"	"	
Magnesium	4580	50.0	15.6	"	1	"	"	"	"	
Potassium	827	200	46.8	"	1	"	"	"	"	
Sodium	4770	200	120	"	1	"	"	"	"	
Zinc	19.8	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	10.6	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.3	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	66.4	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	24.8	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	23.1	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none] Date Reported:
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins 07/08/13 09:50

# WM-30 1306272-02 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.6	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Wet Chemistry										
Bicarbonate Alkalinity	ND	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	381	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
рН	4.27	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	285	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	558	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Arsenic	1.7	10.0	1.0	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	J
Cadmium	11.5	5.0	0.1	"	1	"	"	"	"	
Calcium	36500	100	79.0	"	1	"	"	"	"	
Copper	14600	5.0	0.8	"	1	"	"	"	"	
Iron	719	20.0	11.5	"	1	"	"	"	"	
Magnesium	7110	50.0	15.6	"	1	"	"	"	"	
Potassium	2230	200	46.8	"	1	"	"	"	"	
Sodium	2660	200	120	"	1	"	"	"	"	
Zinc	888	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	3910	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	1.1	10.0	1.0	"	1	"	"	"	"	J
Dissolved Cadmium	11.0	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	13300	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	109	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	876	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none] Date Reported:
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins 07/08/13 09:50

# WM-30 1306272-02RE1 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Sulfate as SO4	193	5.0	0.7	mg/L	10	AWF0248	06/19/13	06/19/13	EPA 300.0	
<b>Total Recoverable Metals</b>										
Aluminum	4820	100	49.0	ug/l	2	AWF0299	06/20/13	07/01/13	EPA 200.7	

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-2 1306272-03 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.3	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	80.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	80.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	135	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
рН	7.41	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	92.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	88.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	54.2	50.0	24.5	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	
Arsenic	1.5	10.0	1.0	"	1	"	"	"	"	J
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	15400	100	79.0	"	1	"	"	"	"	
Copper	ND	5.0	0.8	"	1	"	"	"	"	
Iron	70.8	20.0	11.5	"	1	"	"	"	"	
Magnesium	7700	50.0	15.6	"	1	"	"	"	"	
Potassium	720	200	46.8	"	1	"	"	"	"	
Sodium	2870	200	120	"	1	"	"	"	"	
Zinc	ND	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	38.1	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	13.9	20.0	11.5	"	1	"	"	"	"	J
Dissolved Zinc	9.1	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-19 1306272-04 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	31.5	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	56.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	56.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	162	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.28	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	116	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	52.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	44.9	50.0	24.5	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	J
Arsenic	1.0	10.0	1.0	"	1	"	"	"	"	J
Cadmium	0.4	5.0	0.1	"	1	"	"	"	"	J
Calcium	18300	100	79.0	"	1	"	"	"	"	
Copper	327	5.0	0.8	"	1	"	"	"	"	
Iron	303	20.0	11.5	"	1	"	"	"	"	
Magnesium	5450	50.0	15.6	"	1	"	"	"	"	
Potassium	1800	200	46.8	"	1	"	"	"	"	
Sodium	5340	200	120	"	1	"	"	"	"	
Zinc	27.8	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.3	5.0	0.1	"	1	"	"	"	n .	J
Dissolved Copper	139	5.0	0.8	"	1	"	"	"	n .	
Dissolved Iron	49.0	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	21.3	10.0	0.3	"	1	"	"	"	"	

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

WM-3 1306272-05 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.3	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.8	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	76.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	76.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	133	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
рН	7.57	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	83.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	72.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	116	50.0	24.5	ug/l	1	AWF0299	06/20/13	06/26/13	EPA 200.7	
Arsenic	1.9	10.0	1.0	"	1	"	"	"	"	J
Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Calcium	15000	100	79.0	"	1	"	"	"	"	
Copper	4.7	5.0	0.8	"	1	"	"	"	"	J
Iron	750	20.0	11.5	"	1	"	"	"	"	
Magnesium	7370	50.0	15.6	"	1	"	"	"	"	
Potassium	660	200	46.8	"	1	"	"	"	"	
Sodium	2920	200	120	"	1	"	"	"	"	
Zinc	1.9	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	n .	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	n .	J
Dissolved Copper	7.6	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	195	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.9	10.0	0.3	"	1	"	"	"	"	J

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Date Reported:

07/08/13 09:50

RWQC Central ValleyProject:Walker Mine11020 Sun Center Dr. #200Project Number:[none]Date Reported:Rancho Cordova, CA 95670Project Manager:Jeff Huggins07/08/13 09:50

# WM-4 1306272-06 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	1.1	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	72.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	72.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	133	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.53	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	81.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	62.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	44.2	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	15600	100	79.0	"	1	"	"	"	"	
Copper	13.1	5.0	0.8	"	1	"	"	"	"	
Iron	387	20.0	11.5	"	1	"	"	"	"	
Magnesium	7300	50.0	15.6	"	1	"	"	"	"	
Potassium	702	200	46.8	"	1	"	"	"	"	
Sodium	3280	200	120	"	1	"	"	"	"	
Zinc	5.4	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	10.4	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	174	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.9	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

# WM-9 1306272-07 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	7.4	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	70.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	70.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	138	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.32	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	103	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	68.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	27.2	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	17700	100	79.0	"	1	"	"	"	"	
Copper	10.9	5.0	0.8	"	1	"	"	"	"	
Iron	703	20.0	11.5	"	1	"	"	"	"	
Magnesium	5480	50.0	15.6	"	1	"	"	"	"	
Potassium	1410	200	46.8	"	1	"	"	"	"	
Sodium	4370	200	120	"	1	"	"	"	"	
Zinc	5.6	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	6.6	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	414	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.0	10.0	0.3	"	1	"	"	"	"	J

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Date Reported:

07/08/13 09:50

RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-5 1306272-08 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.2	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	66.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	66.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	114	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.19	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	78.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	52.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	27.0	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	13500	100	79.0	"	1	"	"	"	"	
Copper	1.1	5.0	0.8	"	1	"	"	"	"	J
Iron	810	20.0	11.5	"	1	"	"	"	"	
Magnesium	5230	50.0	15.6	"	1	"	"	"	"	
Potassium	1230	200	46.8	"	1	"	"	"	"	
Sodium	4100	200	120	"	1	"	"	"	"	
Zinc	0.6	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	n .	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	n .	J
Dissolved Copper	3.6	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	478	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.1	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-7b 1306272-09 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	1.2	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	74.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	74.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	128	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.61	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	88.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	66.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
<b>Total Recoverable Metals</b>										
Aluminum	37.0	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	15500	100	79.0	"	1	"	"	"	"	
Copper	15.4	5.0	0.8	"	1	"	"	"	n	
Iron	327	20.0	11.5	"	1	"	"	"	"	
Magnesium	6910	50.0	15.6	"	1	"	"	"	"	
Potassium	742	200	46.8	"	1	"	"	"	"	
Sodium	3490	200	120	"	1	"	"	"	n	
Zinc	3.7	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	11.3	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	180	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.7	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-7c 1306272-10 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	7.6	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	66.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	66.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	132	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
рН	7.78	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	90.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	56.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	27.9	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	17300	100	79.0	"	1	"	"	"	"	
Copper	1.4	5.0	0.8	"	1	"	"	"	"	J
Iron	1210	20.0	11.5	"	1	"	"	"	"	
Magnesium	4840	50.0	15.6	"	1	"	"	"	"	
Potassium	1580	200	46.8	"	1	"	"	"	"	
Sodium	4660	200	120	"	1	"	"	"	"	
Zinc	1.5	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	1.5	10.0	1.0	"	1	"	"	"	n .	J
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	n .	J
Dissolved Copper	3.6	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	634	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	2.6	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

WM-7a 1306272-11 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	1.1	0.5	0.07	mg/L	1	AWF0248	00/19/13	00/19/13	EPA 300.0	J
Wet Chemistry	1.1	0.5	0.07		1					
Bicarbonate Alkalinity	76.0	5.00	2.37	/T	1	AWF0254	06/22/13	06/22/12	G) (2220D	
•	7 <b>0.0</b> ND	5.00	2.37	mg/L	1 1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND ND	5.00	2.37	"		,,	,,	"	,,	
Hydroxide Alkalinity  Total Alkalinity	76.0	5.00	2.37	"	1	,,	,,	,,		
Specific Conductance (EC)	134	5.00	1.09	uS/cm	•					
=		5.00 0.100	0.100		1	AWF0238	06/20/13	06/20/13	EPA 120.1	E:-11
pH Total Dissalved Solids	7.60		7.68	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids Total Hardness	90.0	15.0	2.86	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
	66.0	5.00	2.80		1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	16200	100	79.0	"	1	"	"	"	"	
Copper	17.6	5.0	0.8	"	1	"	"	"	"	
Iron	500	20.0	11.5	"	1	"	"	"	"	
Magnesium	7360	50.0	15.6	"	1	"	"	"	"	
Potassium	717	200	46.8	"	1	"	"	"	"	
Sodium	3400	200	120	"	1	"	"	"	"	
Zinc	2.7	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	13.3	5.0	0.8	"	1	"	"	"	"	
Dissolved Iron	375	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.8	10.0	0.3	"	1	"	"	"	"	J

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Date Reported:

07/08/13 09:50

RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

WM-11 1306272-12 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.3	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.8	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	26.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	26.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	40.3	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.33	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	36.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	18.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	74.0	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	4960	100	79.0	"	1	"	"	"	"	
Copper	3.5	5.0	0.8	"	1	"	"	"	"	J
Iron	52.9	20.0	11.5	"	1	"	"	"	"	
Magnesium	1520	50.0	15.6	"	1	"	"	"	"	
Potassium	458	200	46.8	"	1	"	"	"	"	
Sodium	2320	200	120	"	1	"	"	"	"	
Zinc	10.4	10.0	0.3	"	1	"	"	"	"	
Dissolved Metals										
Dissolved Aluminum	29.9	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	J
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	3.0	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	36.2	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	9.2	10.0	0.3	"	1	"	"	"	"	J

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Date Reported:

07/08/13 09:50

RWQC Central ValleyProject:Walker Mine11020 Sun Center Dr. #200Project Number:[none]Date Reported:Rancho Cordova, CA 95670Project Manager:Jeff Huggins07/08/13 09:50

# WM-12 1306272-13 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.3	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.5	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	18.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	18.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	27.7	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
рН	6.46	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	25.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	14.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	67.6	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	3270	100	79.0	"	1	"	"	"	"	
Copper	5.2	5.0	0.8	"	1	"	"	"	"	
Iron	37.4	20.0	11.5	"	1	"	"	"	"	
Magnesium	1510	50.0	15.6	"	1	"	"	"	"	
Potassium	291	200	46.8	"	1	"	"	"	"	
Sodium	1110	200	120	"	1	"	"	"	"	
Zinc	7.0	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	42.1	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	J
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	4.8	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	23.2	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	8.6	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-13 1306272-14 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.2	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	J
Sulfate as SO4	0.2	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	40.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	40.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	86.5	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.00	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	71.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	44.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	10800	100	79.0	"	1	"	"	"	"	
Copper	1.1	5.0	0.8	"	1	"	"	"	"	J
Iron	14.5	20.0	11.5	"	1	"	"	"	"	J
Magnesium	4550	50.0	15.6	"	1	"	"	"	"	
Potassium	408	200	46.8	"	1	"	"	"	"	
Sodium	2400	200	120	"	1	"	"	"	"	
Zinc	2.1	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	n .	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	n .	J
Dissolved Copper	2.3	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.2	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none] Date Reported:
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins 07/08/13 09:50

# WM-17 1306272-15 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	0.6	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	114	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	114	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	152	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.69	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	96.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	70.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	52.5	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	19400	100	79.0	"	1	"	"	"	"	
Copper	1.6	5.0	0.8	"	1	"	"	"	"	J
Iron	39.3	20.0	11.5	"	1	"	"	"	"	
Magnesium	7790	50.0	15.6	"	1	"	"	"	"	
Potassium	1540	200	46.8	"	1	"	"	"	"	
Sodium	3580	200	120	"	1	"	"	"	"	
Zinc	5.8	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	1.6	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	1.8	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-18 1306272-16 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	0.6	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	64.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	64.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	147	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.84	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	101	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	70.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	60.9	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	18600	100	79.0	"	1	"	"	"	"	
Copper	0.9	5.0	0.8	"	1	"	"	"	"	J
Iron	48.6	20.0	11.5	"	1	"	"	"	"	
Magnesium	7340	50.0	15.6	"	1	"	"	"	"	
Potassium	1730	200	46.8	"	1	"	"	"	"	
Sodium	3830	200	120	"	1	"	"	"	"	
Zinc	2.9	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	ND	5.0	0.1	"	1	"	"	"	"	
Dissolved Copper	1.1	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	1.3	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-16 1306272-17 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/19/13	EPA 300.0	
Sulfate as SO4	0.4	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	78.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	78.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	133	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.89	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	84.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	66.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	38.4	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	17600	100	79.0	"	1	"	"	"	"	
Copper	0.8	5.0	0.8	"	1	"	"	"	"	J
Iron	38.1	20.0	11.5	"	1	"	"	"	"	
Magnesium	6690	50.0	15.6	"	1	"	"	"	"	
Potassium	1070	200	46.8	"	1	"	"	"	"	
Sodium	3110	200	120	"	1	"	"	"	"	
Zinc	1.9	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/02/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	0.9	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	1.0	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-15 1306272-18 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/20/13	EPA 300.0	J
Sulfate as SO4	0.3	0.5	0.07	"	1	"	"	"	"	J
Wet Chemistry										
Bicarbonate Alkalinity	66.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	66.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	122	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	7.90	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	79.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	52.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	49.9	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	J
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	15500	100	79.0	"	1	"	"	"	"	
Copper	2.0	5.0	0.8	"	1	"	"	"	"	J
Iron	39.1	20.0	11.5	"	1	"	"	"	"	
Magnesium	5920	50.0	15.6	"	1	"	"	"	"	
Potassium	1020	200	46.8	"	1	"	"	"	"	
Sodium	2850	200	120	"	1	"	"	"	"	
Zinc	1.3	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/03/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	2.5	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	3.8	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

# WM-14 1306272-19 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.4	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/20/13	EPA 300.0	J
Sulfate as SO4	5.9	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	122	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	122	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	221	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
pН	8.01	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
<b>Total Dissolved Solids</b>	142	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	112	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Calcium	42500	100	79.0	"	1	"	"	"	"	
Copper	2.0	5.0	0.8	"	1	"	"	"	"	J
Iron	14.6	20.0	11.5	"	1	"	"	"	"	J
Magnesium	3090	50.0	15.6	"	1	"	"	"	"	
Potassium	937	200	46.8	"	1	"	"	"	"	
Sodium	2980	200	120	"	1	"	"	"	"	
Zinc	2.0	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/03/13	EPA 200.7	
Dissolved Arsenic	1.2	10.0	1.0	"	1	"	"	"	"	J
Dissolved Cadmium	0.2	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	3.0	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	ND	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	0.8	10.0	0.3	"	1	"	"	"	"	J

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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Date Reported:

07/08/13 09:50

RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

# WM-20 1306272-20 (Water)

Analyte	Result	Reporting Limit	MDL	Units	DF	Batch	Date Prepared	Date Analyzed	Method	Notes
Ion Chromatography										
Chloride	0.5	0.5	0.04	mg/L	1	AWF0248	06/19/13	06/20/13	EPA 300.0	
Sulfate as SO4	<b>8.7</b>	0.5	0.07	"	1	"	"	"	"	
Wet Chemistry										
Bicarbonate Alkalinity	72.0	5.00	2.37	mg/L	1	AWF0254	06/22/13	06/22/13	SM2320B	
Carbonate Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Hydroxide Alkalinity	ND	5.00	2.37	"	1	"	"	"	"	
Total Alkalinity	72.0	5.00	2.37	"	1	"	"	"	"	
Specific Conductance (EC)	142	5.00	1.09	uS/cm	1	AWF0238	06/20/13	06/20/13	EPA 120.1	
рН	8.00	0.100	0.100	pH Units	1	AWF0240	06/20/13	06/20/13	SM 4500-H+ B	Field
Total Dissolved Solids	90.0	15.0	7.68	mg/L	1	AWF0311	06/20/13	06/26/13	SM 2540C	
Total Hardness	60.0	5.00	2.86	"	1	AWF0291	06/23/13	06/23/13	SM2340B	
Total Recoverable Metals										
Aluminum	ND	50.0	24.5	ug/l	1	AWF0299	06/20/13	07/01/13	EPA 200.7	
Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Calcium	17300	100	79.0	"	1	"	"	"	"	
Copper	3.1	5.0	0.8	"	1	"	"	"	"	J
Iron	109	20.0	11.5	"	1	"	"	"	"	
Magnesium	4570	50.0	15.6	"	1	"	"	"	"	
Potassium	1640	200	46.8	"	1	"	"	"	"	
Sodium	6370	200	120	"	1	"	"	"	"	
Zinc	5.8	10.0	0.3	"	1	"	"	"	"	J
Dissolved Metals										
Dissolved Aluminum	ND	50.0	24.5	ug/l	1	AWF0349	06/27/13	07/03/13	EPA 200.7	
Dissolved Arsenic	ND	10.0	1.0	"	1	"	"	"	"	
Dissolved Cadmium	0.1	5.0	0.1	"	1	"	"	"	"	J
Dissolved Copper	4.1	5.0	0.8	"	1	"	"	"	"	J
Dissolved Iron	55.3	20.0	11.5	"	1	"	"	"	"	
Dissolved Zinc	1.5	10.0	0.3	"	1	"	"	"	"	J

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none] Date Reported:
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins 07/08/13 09:50

## **Ion Chromatography - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWF0248 - EPA 300.0											
Blank (AWF0248-BLK1)					Prepared: 0	6/18/13 An	alyzed: 06/	19/13			
Chloride	ND	0.5	0.04	mg/L							
Sulfate as SO4	ND	0.5	0.07	"							
LCS (AWF0248-BS1)					Prepared: 0	6/18/13 An	alyzed: 06/	19/13			
Chloride	10.1	0.5	0.04	mg/L	10.0		101	90-110			
Sulfate as SO4	10.0	0.5	0.07	"	10.0		100	80-120			
LCS Dup (AWF0248-BSD1)					Prepared: 0	6/18/13 An	alyzed: 06/	19/13			
Chloride	10.1	0.5	0.04	mg/L	10.0		101	90-110	0.0198	20	
Sulfate as SO4	10.0	0.5	0.07	"	10.0		99.7	80-120	0.690	20	
Duplicate (AWF0248-DUP1)		Sour	ce: 1306272-	-01	Prepared: 0	6/18/13 An	alyzed: 06/	19/13			
Chloride	0.5	0.5	0.04	mg/L		0.6			2.90	20	
Sulfate as SO4	0.9	0.5	0.07	"		1.0			9.47	20	
Matrix Spike (AWF0248-MS1)		Sour	ce: 1306272-	-01	Prepared: 0	6/18/13 An	alyzed: 06/	19/13			
Chloride	10.7	0.5	0.04	mg/L	10.0	0.6	101	75-125			
Sulfate as SO4	10.9	0.5	0.07	"	10.0	1.0	98.9	75-125			
Matrix Spike Dup (AWF0248-MSD)	1)	Sour	ce: 1306272-	01	Prepared: 0	6/18/13 An	alyzed: 06/	19/13			
Chloride	10.7	0.5	0.04	mg/L	10.0	0.6	101	75-125	0.00935	20	
Sulfate as SO4	10.9	0.5	0.07	"	10.0	1.0	99.1	75-125	0.211	20	

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RWQC Central Valley	Project:	Walker Mine	
11020 Sun Center Dr. #200	Project Number:	[none]	Date Reported:
Rancho Cordova, CA 95670	Project Manager:	Jeff Huggins	07/08/13 09:50

# **Wet Chemistry - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWF0238 - EPA 120.1											
Duplicate (AWF0238-DUP1)		Sour	rce: 1306272	2-10	Prepared &	Analyzed:	06/20/13				
Specific Conductance (EC)	132	5.00	1.09	uS/cm		132			0.0758	20	
Batch AWF0240 - SM 4500-H+	В										
Duplicate (AWF0240-DUP1)		Sour	rce: 1306272	2-10	Prepared &	Analyzed:	06/20/13				
pH	7.74	0.100	0.100	pH Units		7.78			0.515	20	
Batch AWF0254 - SM2320B											
Blank (AWF0254-BLK1)					Prepared &	Analyzed:	06/22/13				
Bicarbonate Alkalinity	4.00	5.00	2.37	mg/L							
Carbonate Alkalinity	ND	5.00	2.37	"							
Hydroxide Alkalinity	ND	5.00	2.37	"							
Total Alkalinity	4.00	5.00	2.37	"							
LCS (AWF0254-BS1)					Prepared &	Analyzed:	06/22/13				
Total Alkalinity	108	5.00	2.37	mg/L	100		108	80-120			
LCS Dup (AWF0254-BSD1)					Prepared &	Analyzed:	06/22/13				
Total Alkalinity	108	5.00	2.37	mg/L	100		108	80-120	0.00	20	
Duplicate (AWF0254-DUP1)		Sour	rce: 1306272	2-02	Prepared &	Analyzed:	06/22/13				
Bicarbonate Alkalinity	ND	5.00	2.37	mg/L		ND				20	
Carbonate Alkalinity	ND	5.00	2.37	"		ND				20	
Hydroxide Alkalinity	ND	5.00	2.37	"		ND				20	
Total Alkalinity	ND	5.00	2.37	"		ND				20	

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none] Date Reported:
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins 07/08/13 09:50

## **Wet Chemistry - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWF0254 - SM2320B											
Matrix Spike (AWF0254-MS1)		Sour	ce: 1306272-	-01	Prepared &	Analyzed: (	06/22/13				
Total Alkalinity	168	5.00	2.37	mg/L	100	62.0	106	80-120			
Matrix Spike Dup (AWF0254-MSD1)		Sour	ce: 1306272-	-01	Prepared &	Analyzed: (	06/22/13				
Total Alkalinity	162	5.00	2.37	mg/L	100	62.0	100	80-120	3.64	20	
Batch AWF0291 - SM2340B											
Blank (AWF0291-BLK1)					Prepared &	Analyzed: (	06/23/13				
Total Hardness	ND	5.00	2.86	mg/L							
LCS (AWF0291-BS1)					Prepared &	Analyzed: (	06/23/13				
Total Hardness	50.0	5.00	2.86	mg/L	50.0		100	80-120			
LCS Dup (AWF0291-BSD1)					Prepared &	Analyzed: (	06/23/13				
Total Hardness	48.0	5.00	2.86	mg/L	50.0		96.0	80-120	4.08	20	
Duplicate (AWF0291-DUP1)		Sour	ce: 1306272-	-02	Prepared &	Analyzed: (	06/23/13				
Total Hardness	570	5.00	2.86	mg/L		558			2.13	20	
Matrix Spike (AWF0291-MS1)		Sour	ce: 1306272-	-01	Prepared &	Analyzed: (	06/23/13				
Total Hardness	102	5.00	2.86	mg/L	50.0	52.0	100	75-125			
Matrix Spike Dup (AWF0291-MSD1)		Sour	ce: 1306272-	-01	Prepared &	Analyzed: (	06/23/13				
Total Hardness	100	5.00	2.86	mg/L	50.0	52.0	96.0	75-125	1.98	20	
Batch AWF0311 - SM 2540C											
Blank (AWF0311-BLK1)					Prepared: 0	6/20/13 An	alyzed: 06/	26/13			
Total Dissolved Solids	ND	15.0	7.68	mg/L	-		-				

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none] Date Reported:
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins 07/08/13 09:50

## **Wet Chemistry - Quality Control**

		Donortina			Cmileo	Course		%REC		R D D	
Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Result	%REC	Limits	RPD	Limit	Notes

# Batch AWF0311 - SM 2540C

<b>Duplicate (AWF0311-DUP1)</b>		Sou	rce: 1306272	-20	Prepared: 06/20/13 Analyzed: 06/26/13			
Total Dissolved Solids	84.0	15.0	7.68	mg/L	90.0	6.90	20	

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RWQC Central ValleyProject:Walker Mine11020 Sun Center Dr. #200Project Number:[none]Date Reported:Rancho Cordova, CA 95670Project Manager:Jeff Huggins07/08/13 09:50

## **Total Recoverable Metals - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWF0299 - EPA 200.7											
Blank (AWF0299-BLK1)					Prepared: 0	6/20/13 An	alyzed: 06/2	26/13			
Aluminum	ND	50.0	24.5	ug/l							
Arsenic	2.40	10.0	1.0	"							
Cadmium	ND	5.0	0.1	"							
Calcium	ND	100	79.0	"							
Copper	ND	5.0	0.8	"							
Iron	ND	20.0	11.5	"							
Magnesium	ND	50.0	15.6	"							
Potassium	ND	200	46.8	"							
Sodium	ND	200	120	"							
Zinc	ND	10.0	0.3	"							
Blank (AWF0299-BLK2)					Prepared: 0	6/20/13 An	alyzed: 07/	01/13			
Aluminum	ND	50.0	24.5	ug/l							
Arsenic	ND	10.0	1.0	"							
Cadmium	ND	5.0	0.1	"							
Calcium	ND	100	79.0	"							
Copper	ND	5.0	0.8	"							
Iron	ND	20.0	11.5	"							
Magnesium	ND	50.0	15.6	"							
Potassium	ND	200	46.8	"							
Sodium	ND	200	120	"							
Zinc	ND	10.0	0.3	"							
LCS (AWF0299-BS1)					Prepared: 0	6/20/13 An	alyzed: 06/2	26/13			
Aluminum	1050	50.0	24.5	ug/l	1000		105	85-115			
Arsenic	989	10.0	1.0	"	1000		98.9	85-115			
Cadmium	979	5.0	0.1	"	1000		97.9	85-115			
Calcium	1000	100	79.0	"	1000		100	85-115			
Copper	1040	5.0	0.8	"	1000		104	85-115			
Iron	1050	20.0	11.5	"	1000		105	85-115			
Magnesium	970	50.0	15.6	"	1000		97.0	85-115			
Potassium	9960	200	46.8	"	10000		99.6	85-115			
Sodium	987	200	120	"	1000		98.7	85-115			
Zinc	988	10.0	0.3	"	1000		98.8	85-115			

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RWQC Central ValleyProject:Walker Mine11020 Sun Center Dr. #200Project Number:[none]Date Reported:Rancho Cordova, CA 95670Project Manager:Jeff Huggins07/08/13 09:50

## **Total Recoverable Metals - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWF0299 - EPA 200.7											
LCS (AWF0299-BS2)					Prepared: 06	6/20/13 Ana	alyzed: 07/0	01/13			
Aluminum	1010	50.0	24.5	ug/l	1000		101	85-115			
Arsenic	964	10.0	1.0	"	1000		96.4	85-115			
Cadmium	1010	5.0	0.1	"	1000		101	85-115			
Calcium	1060	100	79.0	"	1000		106	85-115			
Copper	1060	5.0	0.8	"	1000		106	85-115			
Iron	1020	20.0	11.5	"	1000		102	85-115			
Magnesium	995	50.0	15.6	"	1000		99.5	85-115			
Potassium	10300	200	46.8	"	10000		103	85-115			
Sodium	1000	200	120	"	1000		100	85-115			
Zinc	1050	10.0	0.3	"	1000		105	85-115			
LCS Dup (AWF0299-BSD1)					Prepared: 06	5/20/13 Ana	alyzed: 06/2	26/13			
Aluminum	1060	50.0	24.5	ug/l	1000		106	85-115	0.948	20	
Arsenic	986	10.0	1.0	"	1000		98.6	85-115	0.233	20	
Cadmium	979	5.0	0.1	"	1000		97.9	85-115	0.0204	20	
Calcium	990	100	79.0	"	1000		99.0	85-115	0.955	20	
Copper	1040	5.0	0.8	"	1000		104	85-115	0.866	20	
Iron	1060	20.0	11.5	"	1000		106	85-115	0.568	20	
Magnesium	982	50.0	15.6	"	1000		98.2	85-115	1.20	20	
Potassium	9920	200	46.8	"	10000		99.2	85-115	0.352	20	
Sodium	991	200	120	"	1000		99.1	85-115	0.354	20	
Zinc	986	10.0	0.3	"	1000		98.6	85-115	0.152	20	
LCS Dup (AWF0299-BSD2)					Prepared: 06	5/20/13 Ana	alyzed: 07/0	01/13			
Aluminum	1050	50.0	24.5	ug/l	1000		105	85-115	3.89	20	
Arsenic	968	10.0	1.0	"	1000		96.8	85-115	0.383	20	
Cadmium	1010	5.0	0.1	"	1000		101	85-115	0.0991	20	
Calcium	1060	100	79.0	"	1000		106	85-115	0.283	20	
Copper	1070	5.0	0.8	"	1000		107	85-115	0.941	20	
Iron	1040	20.0	11.5	"	1000		104	85-115	1.65	20	
Magnesium	1020	50.0	15.6	"	1000		102	85-115	2.07	20	
Potassium	10300	200	46.8	"	10000		103	85-115	0.582	20	
Sodium	1000	200	120	"	1000		100	85-115	0.00	20	
Zinc	1050	10.0	0.3	"	1000		105	85-115	0.286	20	

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none] Date Reported:
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins 07/08/13 09:50

## **Total Recoverable Metals - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWF0299 - EPA 200.7											
Matrix Spike (AWF0299-MS1)		Sour	ce: 1306272-	01	Prepared: 06	6/20/13 An	alyzed: 06/2	26/13			
Aluminum	1040	50.0	24.5	ug/l	1000	ND	104	75-125			
Arsenic	1010	10.0	1.0	"	1000	12.5	99.4	75-125			
Cadmium	982	5.0	0.1	"	1000	ND	98.2	75-125			
Calcium	13000	100	79.0	"	1000	12100	89.0	75-125			
Copper	1130	5.0	0.8	"	1000	93.6	103	75-125			
ron	1080	20.0	11.5	"	1000	34.8	104	75-125			
Magnesium	5480	50.0	15.6	"	1000	4580	90.3	75-125			
Potassium	11000	200	46.8	"	10000	827	102	75-125			
Sodium	5760	200	120	"	1000	4770	99.6	75-125			
Zinc	1010	10.0	0.3	"	1000	19.8	98.6	75-125			
Matrix Spike (AWF0299-MS2)		Sour	ce: 1306272-	11	Prepared: 06	5/20/13 An	alyzed: 07/	01/13			
Aluminum	1040	50.0	24.5	ug/l	1000	ND	104	75-125			
Arsenic	967	10.0	1.0	"	1000	ND	96.7	75-125			
Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125			
Calcium	17100	100	79.0	"	1000	16200	87.0	75-125			
Copper	1070	5.0	0.8	"	1000	17.6	105	75-125			
ron	1520	20.0	11.5	"	1000	500	102	75-125			
Magnesium	8300	50.0	15.6	"	1000	7360	94.2	75-125			
Potassium	11100	200	46.8	"	10000	717	104	75-125			
Sodium	4430	200	120	"	1000	3400	103	75-125			
Zinc	1040	10.0	0.3	"	1000	2.70	104	75-125			
Matrix Spike Dup (AWF0299-MS	D1)	Sour	ce: 1306272-	01	Prepared: 06	5/20/13 An	alyzed: 06/2	26/13			
Aluminum	1060	50.0	24.5	ug/l	1000	ND	106	75-125	2.48	25	
Arsenic	1010	10.0	1.0	"	1000	12.5	99.4	75-125	0.0994	25	
Cadmium	982	5.0	0.1	"	1000	ND	98.2	75-125	0.0102	25	
Calcium	13100	100	79.0	"	1000	12100	94.0	75-125	0.383	25	
Copper	1120	5.0	0.8	"	1000	93.6	103	75-125	0.712	25	
ron	1100	20.0	11.5	"	1000	34.8	106	75-125	1.56	25	
Magnesium	5510	50.0	15.6	"	1000	4580	93.0	75-125	0.491	25	
Potassium	11100	200	46.8	"	10000	827	103	75-125	0.996	25	
Sodium	5820	200	120	"	1000	4770	105	75-125	1.00	25	
Zinc	1000	10.0	0.3	"	1000	19.8	98.4	75-125	0.199	25	

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none]
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50

## **Total Recoverable Metals - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes

## Batch AWF0299 - EPA 200.7

Matrix Spike Dup (AWF0299-MSD2)	)	Sou	ırce: 1306272-	Prepared: 06	6/20/13 Ana	alyzed: 07/	/01/13				
Aluminum	1030	50.0	24.5	ug/l	1000	ND	103	75-125	0.968	25	
Arsenic	975	10.0	1.0	"	1000	ND	97.5	75-125	0.855	25	
Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125	0.396	25	
Calcium	16800	100	79.0	"	1000	16200	56.0	75-125	1.83	25	QL-01
Copper	1080	5.0	0.8	"	1000	17.6	106	75-125	0.372	25	
Iron	1500	20.0	11.5	"	1000	500	100	75-125	1.26	25	
Magnesium	8220	50.0	15.6	"	1000	7360	86.3	75-125	0.957	25	
Potassium	11000	200	46.8	"	10000	717	103	75-125	1.17	25	
Sodium	4350	200	120	"	1000	3400	95.0	75-125	1.91	25	
Zinc	1040	10.0	0.3	"	1000	2.70	104	75-125	0.0958	25	

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RWQC Central ValleyProject:Walker Mine11020 Sun Center Dr. #200Project Number:[none]Date Reported:Rancho Cordova, CA 95670Project Manager:Jeff Huggins07/08/13 09:50

# **Dissolved Metals - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWF0349 - EPA 200.7											
Blank (AWF0349-BLK1)					Prepared: 0	6/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	ND	50.0	24.5	ug/l							
Dissolved Arsenic	ND	10.0	1.0	"							
Dissolved Cadmium	ND	5.0	0.1	"							
Dissolved Copper	ND	5.0	0.8	"							
Dissolved Iron	ND	20.0	11.5	"							
Dissolved Zinc	1.10	10.0	0.3	"							
Blank (AWF0349-BLK2)					Prepared: 0	6/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	ND	50.0	24.5	ug/l							
Dissolved Arsenic	ND	10.0	1.0	"							
Dissolved Cadmium	ND	5.0	0.1	"							
Dissolved Copper	ND	5.0	0.8	"							
Dissolved Iron	ND	20.0	11.5	"							
Dissolved Zinc	0.900	10.0	0.3	"							
LCS (AWF0349-BS1)					Prepared: 0	6/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	1030	50.0	24.5	ug/l	1000		103	85-115			
Dissolved Arsenic	981	10.0	1.0	"	1000		98.1	85-115			
Dissolved Cadmium	1000	5.0	0.1	"	1000		100	85-115			
Dissolved Copper	1040	5.0	0.8	"	1000		104	85-115			
Dissolved Iron	1060	20.0	11.5	"	1000		106	85-115			
Dissolved Zinc	1010	10.0	0.3	"	1000		101	85-115			
LCS (AWF0349-BS2)					Prepared: 0	6/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	1090	50.0	24.5	ug/l	1000		109	85-115			
Dissolved Arsenic	972	10.0	1.0	"	1000		97.2	85-115			
Dissolved Cadmium	1010	5.0	0.1	"	1000		101	85-115			
Dissolved Copper	1040	5.0	0.8	"	1000		104	85-115			
Dissolved Iron	1080	20.0	11.5	"	1000		108	85-115			
Dissolved Zinc	1020	10.0	0.3	"	1000		102	85-115			

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RWQC Central ValleyProject:Walker Mine11020 Sun Center Dr. #200Project Number:[none]Date Reported:Rancho Cordova, CA 95670Project Manager:Jeff Huggins07/08/13 09:50

## **Dissolved Metals - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWF0349 - EPA 200.7											
LCS Dup (AWF0349-BSD1)					Prepared: 0	6/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	1040	50.0	24.5	ug/l	1000		104	85-115	1.45	20	
Dissolved Arsenic	987	10.0	1.0	"	1000		98.7	85-115	0.630	20	
Dissolved Cadmium	1010	5.0	0.1	"	1000		101	85-115	0.596	20	
Dissolved Copper	1040	5.0	0.8	"	1000		104	85-115	0.386	20	
Dissolved Iron	1020	20.0	11.5	"	1000		102	85-115	4.14	20	
Dissolved Zinc	1010	10.0	0.3	"	1000		101	85-115	0.792	20	
LCS Dup (AWF0349-BSD2)					Prepared: 0	6/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	1040	50.0	24.5	ug/l	1000		104	85-115	4.50	20	
Dissolved Arsenic	968	10.0	1.0	"	1000		96.8	85-115	0.464	20	
Dissolved Cadmium	1010	5.0	0.1	"	1000		101	85-115	0.0989	20	
Dissolved Copper	1030	5.0	0.8	"	1000		103	85-115	0.677	20	
Dissolved Iron	1100	20.0	11.5	"	1000		110	85-115	1.66	20	
Dissolved Zinc	1020	10.0	0.3	"	1000		102	85-115	0.295	20	
Matrix Spike (AWF0349-MS1)		Sour	ce: 1306272-	-03	Prepared: 0	6/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	1060	50.0	24.5	ug/l	1000	ND	106	75-125			
Dissolved Arsenic	984	10.0	1.0	"	1000	ND	98.4	75-125			
Dissolved Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125			
Dissolved Copper	1050	5.0	0.8	"	1000	38.1	101	75-125			
Dissolved Iron	1080	20.0	11.5	"	1000	13.9	106	75-125			
Dissolved Zinc	1020	10.0	0.3	"	1000	9.10	101	75-125			
Matrix Spike (AWF0349-MS2)		Sour	ce: 1306272-	-11	Prepared: 00	5/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	1070	50.0	24.5	ug/l	1000	ND	107	75-125			
Dissolved Arsenic	975	10.0	1.0	"	1000	ND	97.5	75-125			
Dissolved Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125			
Dissolved Copper	1040	5.0	0.8	"	1000	13.3	103	75-125			
Dissolved Iron	1420	20.0	11.5	"	1000	375	104	75-125			
Dissolved Zinc	1010	10.0	0.3	"	1000	3.80	101	75-125			

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RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none] Date Reported:
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins 07/08/13 09:50

## **Dissolved Metals - Quality Control**

Analyte	Result	Reporting Limit	MDL	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch AWF0349 - EPA 200.7											
Matrix Spike Dup (AWF0349-MS	D1)	Sour	rce: 1306272-	03	Prepared: 00	6/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	1040	50.0	24.5	ug/l	1000	ND	104	75-125	2.76	25	
Dissolved Arsenic	983	10.0	1.0	"	1000	ND	98.3	75-125	0.0610	25	
Dissolved Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125	0.198	25	
Dissolved Copper	1050	5.0	0.8	"	1000	38.1	101	75-125	0.191	25	
Dissolved Iron	1050	20.0	11.5	"	1000	13.9	103	75-125	2.73	25	
Dissolved Zinc	1010	10.0	0.3	"	1000	9.10	100	75-125	0.887	25	
Matrix Spike Dup (AWF0349-MS	D2)	Sour	rce: 1306272-	11	Prepared: 00	6/27/13 An	alyzed: 07/	02/13			
Dissolved Aluminum	1090	50.0	24.5	ug/l	1000	ND	109	75-125	2.22	25	
Dissolved Arsenic	980	10.0	1.0	"	1000	ND	98.0	75-125	0.522	25	
Dissolved Cadmium	1010	5.0	0.1	"	1000	0.200	101	75-125	0.0991	25	
Dissolved Copper	1030	5.0	0.8	"	1000	13.3	102	75-125	0.867	25	
Dissolved Iron	1450	20.0	11.5	"	1000	375	107	75-125	1.96	25	
Dissolved Zinc	1000	10.0	0.3	"	1000	3.80	100	75-125	0.991	25	

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RWQC Central Valley	Project:	Walker Mine	
11020 Sun Center Dr. #200	Project Number:	[none]	Date Reported:
Rancho Cordova, CA 95670	Project Manager:	Jeff Huggins	07/08/13 09:50

#### **Notes and Definitions**

QL-01 Sample results for the QC batch were accepted based on LCS/LCSD percent recoveries and RPD values.

J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).

Field This analyte was analyzed outside of the EPA recommended hold time of ASAP and should be analyzed in the field.

ND Analyte not detected at reporting limit.

NR Not reported

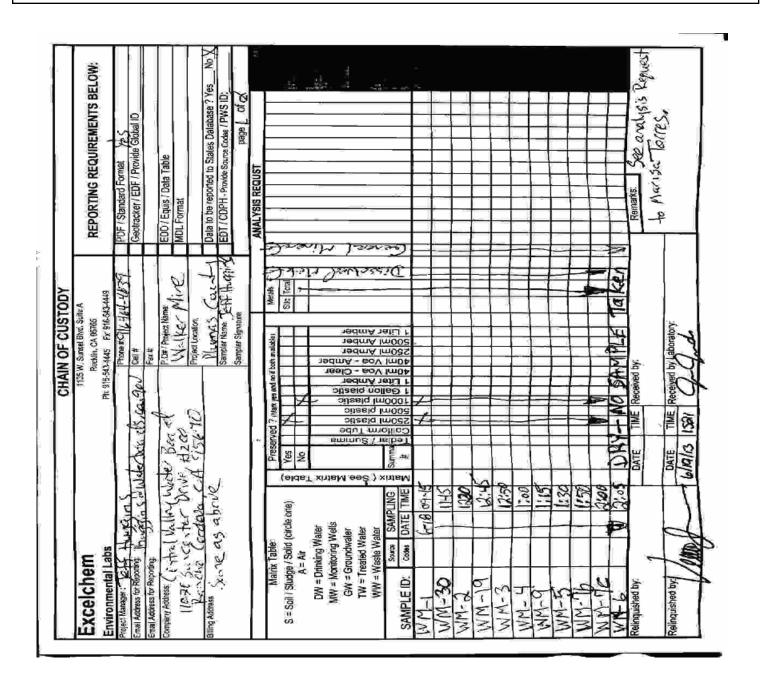
Analysis Method	Prep Method
EPA 8260, EPA 8021/8015M	EPA 5030B
EPA 8270, EPA 8081, EPA 8082, EPA 8141, EPA 8015M (extractable)	Water - EPA 3510C, Soil- EPA 3550B
Metals	Water- 3005A, Soil- 3050B
TCLP	EPA 1311
Not Specified	Same as Analysis Method

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RWQC Central Valley Project: Walker Mine 11020 Sun Center Dr. #200 Project Number: [none]

11020 Sun Center Dr. #200Project Number:[none]Date Reported:Rancho Cordova, CA 95670Project Manager:Jeff Huggins07/08/13 09:50



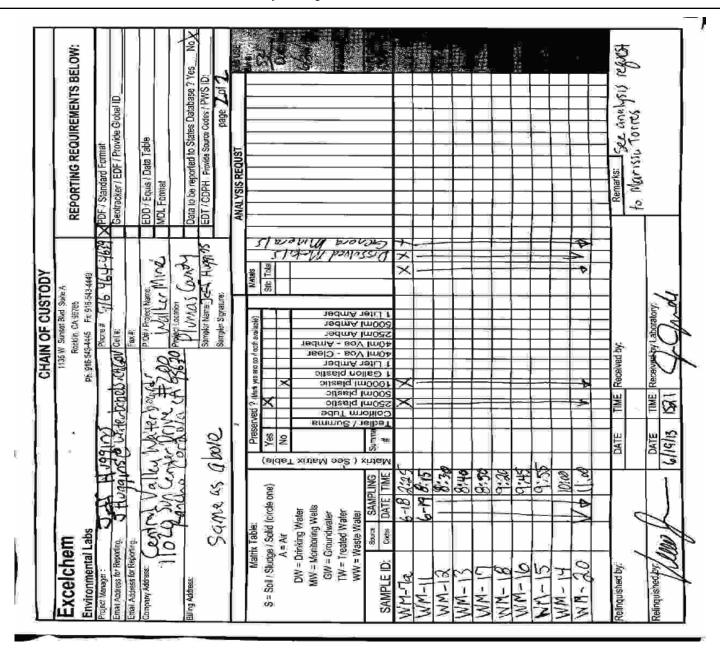
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RWQC Central Valley 11020 Sun Center Dr. #200 Rancho Cordova, CA 95670 Project: Walker Mine

Project Number: [none]
Project Manager: Jeff Huggins

Date Reported: 07/08/13 09:50



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RWQC Central Valley Project: Walker Mine 11020 Sun Center Dr. #200 Project Number: [none] Date Reported: Rancho Cordova, CA 95670 Jeff Huggins 07/08/13 09:50 Project Manager:

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Thanks,

Jeff H

>>> Front Desk <FrontDeski@excelchem.net> 6/5/2012 1.56 PM >>>

For the dissolved metals, will you filter in the field or should we filter at lab?

We will give you 250 mL preserved with HNO3 for the total metals. If we are to do the filtering for dissolved metals, we will give you (1) lifer only bottles for rest.

We have some time today to preserve, so we will be able to deliver these bottles to you tomorrow.

If you have any questions or concerns, please send an e-mail

Thank you,

Marisa Torres

Excelchem Environmental Labs

1135 W Sunset Blvd, State A

Rocklin, CA 95765

(916) 543-4445 Phone

(916) 543-4449 Fax

From: Jeff Huggins [mailto:jhuggins@waterboards.ca.gov] Sent: Tuesday, June 05, 2012 1:27 PM

To: Front Desk

Cc: Leticia Valadez

Subject: Request for Sample Bottles and Analytical Services - Walker Mine Project

We are planning on doing some water sampling (no solls) next week at an old abandoned copper mine (Walker Mine) in Plumas County. In October of last year Excelchem provided bottles and analytical services for this same site. Excelchem's Work Order number for the 23 November 2011 analytical report is: 11.11071.

We would like Excelchem to analyze and report for the same constituents as last year. Those were:

- Total Metals Aluminum, Arsenic, Copper, Iron, Zinc, and Cadmium. All with HNG3 (or equal) preservative.
- Dissolved Metals Aluminum, Arsenic, Copper, Iron, Ziric, and Cadmium.
   General Minerals Total Alkailnity, Bicarbonate as CaCO3, Carbonate as CaCO3, Hydroxide as CaCO3, Chiorioe, Spedific Conductance (EC), Caidium, Magneslum, Potassium, Sodium, Hardness as CaCO3, pH; Sulfate as SO4 and Total Dissolved Solids.

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6/6/2012

Excelchem Environmental Lab.

RWQC Central Valley Project: Walker Mine
11020 Sun Center Dr. #200 Project Number: [none] Date Reported:
Rancho Cordova, CA 95670 Project Manager: Jeff Huggins 07/08/13 09:50

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Excelchem Environmental Lab.